

C L A I M S

1. A device for measuring characteristics of toolings, said device comprising:

5 a radiation source adapted to generate radiation;
 means for diverting said radiation so as to pass through a
 profile in the toolings;
 detector adapted to receive said radiation that passed through
 the profile;

10 whereby the characteristics of toolings are processed from the detected
 radiation that passes through the profile.

2. The device as claimed in Claim 1, wherein the toolings are chuck and roll
15 in a seamer and the characteristics are the profiles of a gap between the
 chuck and the roll.

3. The device as claimed in Claim 1, wherein said radiation is selected from
 a group consisting of electromagnetic radiation, light radiation or laser
 light.

- 20 4. The device as claimed in Claim 1, further comprising at least one beam
 expander so as to generate a coherent beam.

- 25 5. The device as claimed in Claim 4, wherein said at least one beam
 expander is comprised of two lenses that expand the beam with a
 minimal dissipation.

- 30 6. The device as claimed in Claim 1, wherein said means for diverting said
 radiation is selected from a group of diverters such as prism, mirror, lens,
 or fiber-optic.

7. The device as claimed in Claim 1, wherein said means for diverting the radiation is a prism.
- 5 8. The device as claimed in Claim 7, wherein a first prism diverts the radiation towards the profile and wherein said second prism diverts the radiation that passes through the profile.
9. The device as claimed in Claim 8, wherein said detector and said source are positioned side by side and said first prism and said second prism
10 are positioned in a predetermined distance and opposite to one another so as to form a bypass of said radiation.
10. The device as claimed in Claim 1, further comprising a magnification system adapted to receive said radiation that passes through the profile
15 and transfers it so as to hit said detector.
11. The device as claimed in Claim 1, wherein said detector is a CCD camera.
- 20 12. The device as claimed in Claim 1, wherein the characteristics of toolings are a distance between the toolings.
13. The device as claimed in Claim 1, wherein the characteristics of toolings are the clearance between the toolings.
- 25 14. A method for measuring characteristics of toolings comprising:
 - providing a radiation source adapted to generate radiation;
 - providing a first means for diverting said radiation so as to pass through a profile in the toolings;
 - 30 providing a second means for diverting said radiation that passes through the profile;
 - directing the diverted radiation to a detector;

whereby the characteristics of the profile is processed from the detected radiation that passes through the profile.

- 5 15. The method as claimed in Claim 14, wherein said radiation is selected from a group consisting of electromagnetic radiation, light radiation or laser light.
- 10 16. The method as claimed in Claim 14, wherein the toolings are chuck and roll in a seamer and the characteristics are the profiles of a gap between the chuck and the roll.
- 15 17. The method as claimed in Claim 14, wherein said first means for diverting and said second means for diverting said radiation are selected from a group comprising diverters such as prism, mirror, lens, or fiber-optic.